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1966

LEWIS

UNITED STATES DEPARTMENT OF AGRICULTURE

FOREST SERVICE

REPORT OF BLACK PINE AND RAFT RIVER SITE STUDY PLOTS

SAWTOOTH NATIONAL FOREST

1966

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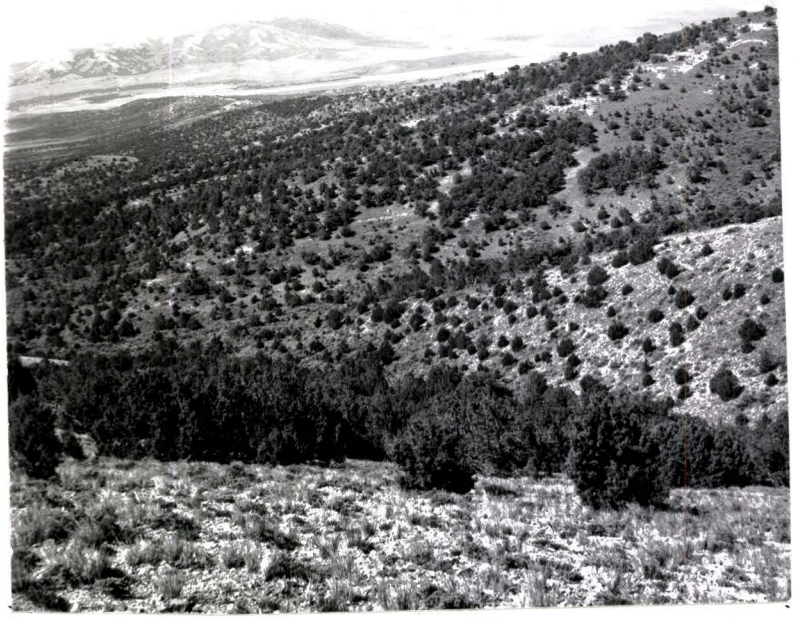
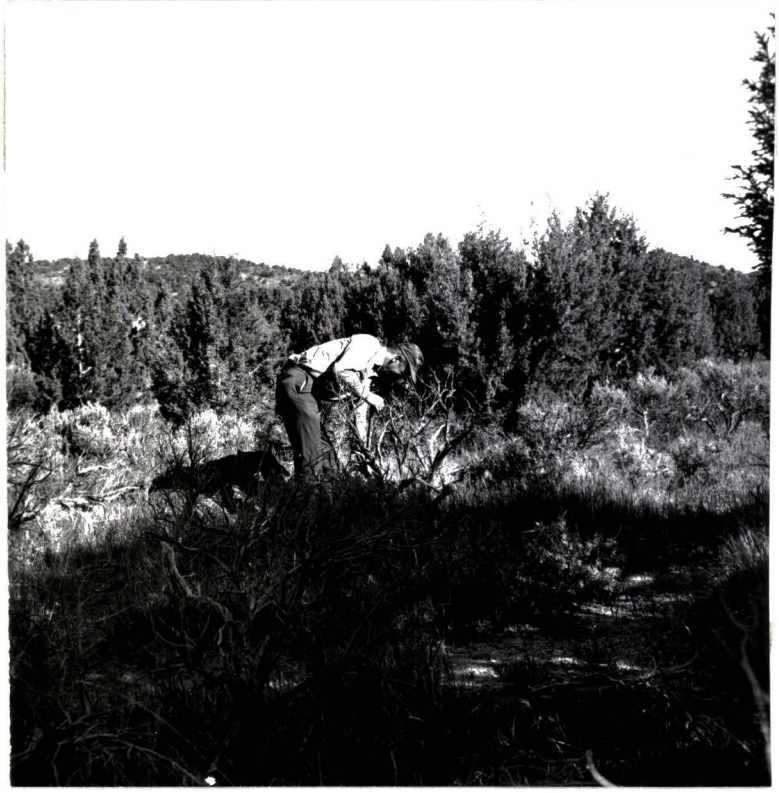


Black Pine - General view - looking SW into head of Left Fork of Rice Canyon. Photo from top of ridge between forks of Rice Canyon. May 24, 1966.

Black Pine - View south down ridge between the forks of Rice Canyon.



Stop BP01 - Just east of Rice Canyon Road, $\frac{1}{4}$ mile north of National Forest boundary.

Elevation - 5400', Slope 6% Aspect - SSE

Juniper data

Height Class	Percent
0-2	0
3-6	30
7-11	61
12-17	9
18+	0

Trees per acre - 200
Percent tree overstory - 19
Juniper trees
Av. height - 7.6'
Av. crown diameter - 6.3'

Age of stand from borings of 4 trees

$1\frac{1}{2}$ inch basal diameter	29 years
$3\frac{1}{2}$ " " "	41 "
$4\frac{1}{2}$ " " "	65 "
7 " " "	76 "

SITE ANALYSIS SUMMARY

WRITEUP NO.	PHOTO NO.
BP 01	

FOREST	RANGER DISTRICT	ALLOTMENT	EXAMINER	DATE
14	08		MEL LEH TAP	5/23/67

TRANSECT NO.	PLOT SIZE	PLOT INTERVAL	TYPE DESIGNATION	KIND OF LIVESTOCK	SLOPE	ASPECT
	1.92	10	09		06	170

LOCATION: Just east of Rice Canyon Road $\frac{1}{4}$ mile north of National Forest boundery.

ELEVATION: 54

	SPECIES	TOTAL PRODUCTION - GREEN WEIGHT TRANS 1	TRANS 2	TRANS 3	TOTAL	AV	DRY WT.	* PROD. DRY WT. PER ACRE	PERCENT COMPOSITION	DESIRABILITY RATING D	I	L
GRASSES	AGSP	47	51	4	102	34	170	68	24	24		
	BRTET	1	3	22	26	9	45	16	6			6
	AGSM	3	4	39	46	15	75	34	12	12		
	POSE	7	8	15	30	10	50	23	8		8	
	STIPA	0	0	7	7	2	10	4	1	1		
								145				
FORBS	PHHOC	11	16	5	32	11	55	22	8		8	
	ANDI2	T	2	0	2	1	5	1	T			
	ACLA	T	0	0	T	T	T	T	T			
	PHLO	4	7	4	15	5	25	5	2		2	
	DESCU	T	2	4	6	2	10	2	1			1
	MICRO	0	1	1	2	1	5	1	T			
	ARABI	0	3	0	3	1	5	1	T			
	ALLIU	0	11	2	13	4	20	3	1		1	
	LESQU	0	0	T	T	T	T	T	T			
								35				
BROWSE	ARTRT	30	26	145	201	67	335	100	35		10	25
	CHVI	7	4	1	12	4	20	7	2		2	
								107				
	Adjusted production = 452 lbs/Acre											
	TOTAL						AVERAGE	AV 287	X X X			

% OVERSTORY (TREES)	5	28	17		17
% OVERSTORY (SHRUBS)	12	2	14		9
% CROWN COVER (HERB.)					
% BARE GROUND	39	33	28		33
% ROCK & PAV. (NAT.)					
% ROCK & PAV. (UNNAT.)	17	25	0		14
% VEG. & LITTER	44	42	72		53
% SOIL DISTURBANCE					
AV. NO. DROPPINGS					
AV. NO. PELLET GROUPS					

% DESIRABLE	37
% INTERMEDIATE	31
% LEAST DESIRABLE	32
CONDITION RATING:	
COMPOSITION RATING	
PRODUCTION RATING	
FORAGE CONDITION RATING	
GROUND COVER INDEX	
CURRENT EROSION INDEX	
SOIL CONDITION RATING	

* CALCULATE BY FORMULA BASED ON SIZE OF PLOTS USED (SEE 41.3-3)

BROWSE: CONDITION_____ APPARENT TREND_____

U. S. Forest Service
Ogden, Utah
2510

RANGE SOILS INVESTIGATIONS

Forest Sawtooth Malta R.D. Plot No. (BP-01) 1

Date 5/23/67 Observers Arnold

Location Rice Canyon Rd. $\frac{1}{4}$ mile North of National Forest Boundary

Elevation 5400 Annual Precipitation

Ecological Type

Erosion EI - 21

Surface Condition 37% openings with gravel mulch

Parent Material Limey fill over soft lake sediments

Landform Swale on disected pediment

Relief Aspect SE Slope 6%

Estimated Productivity

Remarks

Form R4-2500-2
Rev. Nov. 1959

RANGE - SOIL STUDIES

Stop 1 - Juniper Type

Colors are for the dry conditions unless otherwise noted.

A11 -- 0-4" -- Grayish brown (10YR 5/2) light silt loam, dark grayish brown (10YR 4/2) moist; very weak fine granular structure; loose, friable, non-sticky and plastic; abundant fine roots; slightly effervescent; moderately alkaline (pH 8.0); clear wavy boundary.

A12 -- 4-8" -- Grayish brown (10YR 5/2) silt loam, dark grayish brown (10YR 4/2) moist; moderate medium to coarse platy structure; soft, friable, non-sticky plastic; few coarse plentiful fine medium roots; few fine tubular pores; slightly effervescent; moderately alkaline (pH 8.0); clear wavy boundary.

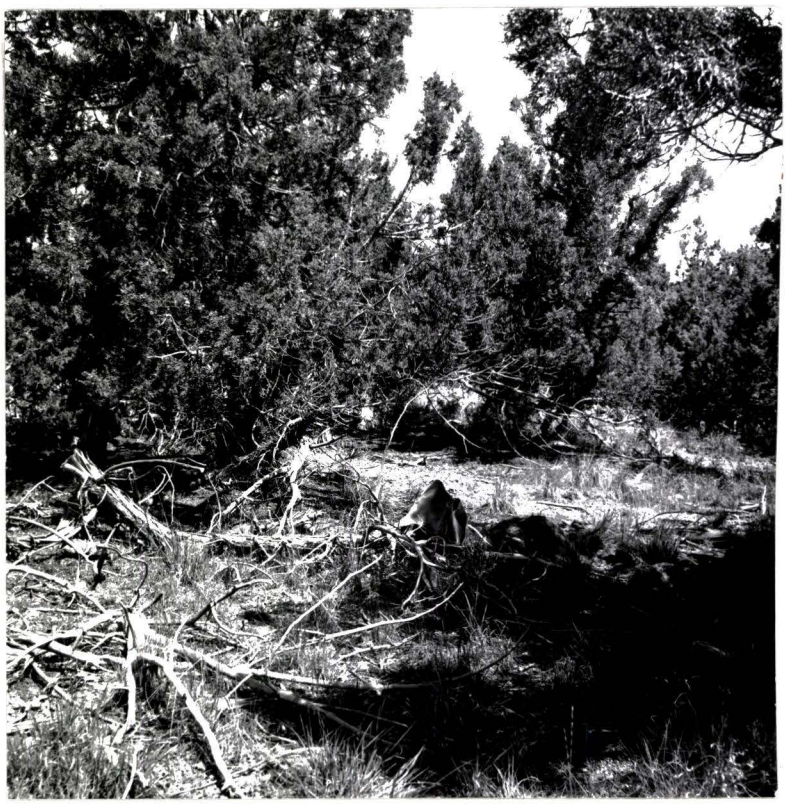
A13 -- 8-15" -- Dark grayish brown (10YR 4/2) moist silt loam; weak medium subangular blocky breaking to weak and moderate fine and medium granular structure; soft, friable, non-sticky and plastic; very few coarse, few medium plentiful fine roots; common tubular pores; strongly effervescent; moderately alkaline (pH 8.0) gradual wavy boundary.

B22 -- 15-23" -- Yellowish brown (10YR 5/4) moist heavy silt loam; moderate medium blocky structure; hard, firm, slightly sticky and plastic; very few thin clay films in cavities and pores; few fine and coarse roots; few fine and common pores alkaline (pH 8.0); gradual wavy boundary.

C1 -- 23-30" -- Grayish brown (10YR 5.2) moist fine gravelly silt loam; massive; hard firm non-sticky and plastic; very few fine and medium and coarse roots; strongly effervescent; clear wavy boundary.

C2 -- 30-36" -- Pale brown (10YR 6.3) moist gravelly loam; massive; hard, friable, non-sticky slightly plastic; plentiful fine medium roots; strongly effervescent; abrupt wavy boundary.

C3 -- 36"+ -- Very pale brown (10YR 7.3) moist very gravelly fine sandy loam; massive; very hard firm non-sticky, non-plastic; strongly effervescent.



Stop BP02 - Ridge between forks of Left Fork of Rice Canyon just north of the end of the road.

Elevation 5600', Slope 8% Aspect 128° (SE)

Juniper data

Height Class	Percent
0'-2'	0
3'-6'	24
7'-11'	36
12'-17'	31
18+	9

Trees per acre - 366
Percent tree overstory - 63
Juniper trees
Av. height - 10.4'
Av. crown diameter - 8.3'

SITE ANALYSIS SUMMARY

WRITEUP NO.	PHOTO NO.
BP 02	

FOREST	RANGER DISTRICT	ALLOTMENT	EXAMINER	DATE
14	08		MEL LEH TAP	5/23/67

TRANSECT NO.	PLOT SIZE	PLOT INTERVAL	TYPE DESIGNATION	KIND OF LIVESTOCK	SLOPE	ASPECT
	1.92	10	09	S&G	8	128

LOCATION: Ridge between forks of left Fork Rice Canyon just north of end of road.

ELEVATION: 56

	SPECIES	TOTAL PRODUCTION - GREEN WEIGHT					DRY WT.	* PROD. DRY WT. PER ACRE	PERCENT COMPOSITION	DESIRABILITY RATING D	I	L
		TRANS 1	TRANS 2	TRANS 3	TOTAL							
GRASSES	ACSP	15	7	38	60	20	100	45	44	30	14	
	BRTET	1	4	1	6	2	10	4	4			4
	POSE	8	8	3	19	6	30	13	12		12	
	CRIY	0	2	27	29	9	45	20	18	18		
								82				
FORBS	DESCU	2	T	2	4	1	5	1	T			
	NEBR	T	T	0	T	T						
	DELPH	T	0	0	T	T						
	AGOSE	T	0	0	T	T						
	PHHOC	T	0	0	T	T						
	HAAC	T	0	0	T	T						
	COTE	0	T	4	4	1	5	1	T			
	ALAC	0	T	4	4	1	5	1	T			
	PENST	0	1	0	1	T						
	CYLO	0	2	1	3	1	5	1	T			
	HAAC	0	2	0	2	1	5	1	T			
	ANDI	0	1	0	1	T						
	GALIN	0	0	T	T	T						
								5				
BROWSE	CHVI	4	0	0	4	1	5	2	2		2	
	SYOR	6	3	4	13	4	20	7	6	6		
	PUTR	T	5	0	5	2	10	4	4	4		
	GUSA	0	6	12	18	6	30	10	10			10
								23				
		Adjusted production = 175 lbs/A										
	TOTAL						AVERAGE	AV. 110	X X X			

% OVERSTORY (TREES)	46	4	19		23	% DESIRABLE
% OVERSTORY (SHRUBS)	1	T	T		T	% INTERMEDIATE
% CROWN COVER (HERB.)						% LEAST DESIRABLE
% BARE GROUND	20	41	38		33	CONDITION RATING:
% ROCK & PAV. (NAT.)	4	2	10		5	COMPOSITION RATING
% ROCK & PAV. (UNNAT.)	12	35	T		16	PRODUCTION RATING
% VEG. & LITTER	64	22	52		46	FORAGE CONDITION RATING
% SOIL DISTURBANCE						GROUND COVER INDEX
AV. NO. DROPPINGS						CURRENT EROSION INDEX
AV. NO. PELLET GROUPS						SOIL CONDITION RATING

* CALCULATE BY FORMULA BASED ON SIZE OF PLOTS USED (SEE 41.3-3)

BROWSE: CONDITION _____ APPARENT TREND _____

U. S. Forest Service
Ogden, Utah
2510

RANGE SOILS INVESTIGATIONS

Forest Sawtooth Plot No. (BP - 02) 2

Date 5/23/67 Observers Arnold

Location Rice Canyon - Ridge between forks of canyon just north of end of road.

Elevation 5600 Annual Precipitation

Ecological Type

Erosion EI - 40

Surface Condition 20% gravel mulch

Parent Material Limey sandstone

Landform low broad ridge spur.

Relief Aspect SE Slope 8%

Estimated Productivity

Remarks

Form R4-2500-2
Rev. Nov. 1959

RANGE - SOIL STUDIES

Juniper Type

Stop 2.

Colors are for the dry conditions unless otherwise noted.

A1 -- 0-3" -- Grayish brown (10YR 5/2) gravelly heavy silt loam, dark grayish brown (10YR 4/2) moist; weak fine granular structure; soft, friable, non-sticky and slightly plastic; plentiful medium and abundant fine roots; strongly effervescent; clear wavy boundary.

A3 -- 3-12" -- Dark grayish brown (9YR 4/2) moist silt loam; weak to moderate fine and medium granular structure; soft, friable, non-sticky slightly plastic; 10% gravels by volume; few coarse plentiful fine and medium roots; strongly effervescent; abrupt wavy boundary.

R -- 12"+ -- Sandstone bedrock.

Stop BP03 - West side of road, 1 mile up Right Fork of Rice Canyon.

Elevation 5500', Slope 6% Aspect 128° (SE)

Juniper data

Height Class	Percent
0'-2'	0
3'-6'	48
7'-11'	30
12'-17'	22
18+	0

Trees per acre - 322
Percent tree overstory - 29
Juniper trees
Av. height - 7.8'
Av. crown diameter - 6.3'

Juniper tree age data

Basal diameter	Age by ring count
1-3/4"	41 years
4"	52 "
6"	76 "

U. S. Forest Service
Ogden, Utah
2510

RANGE SOILS INVESTIGATIONS

(BP - 03)

Forest Sawtooth Plot No. 3

Date 5/23/67 Observers Arnold

Location West side of road 1 mile up right fork of Rice Canyon

Elevation 5500 Annual Precipitation

Ecological Type

Erosion EI - 42

Surface Condition

Parent Material

Landform

Relief Aspect SE Slope 6%

Estimated Productivity

Remarks

Form R4-2500-2
Rev. Nov. 1959

RANGE - SOIL STUDIES

Stop 3 - Juniper Type

Colors are for the dry conditions unless otherwise noted.

A1 -- 0-4" -- Dark grayish brown (10YR 4/2) moist light silt loam; weak fine granular structure; loose, friable and non-sticky slightly plastic; 15% fine gravels; abundant fine roots; slightly effervescent; clear wavy boundary.

B1 -- 4-9" -- Dark grayish brown (9YR 4/2) moist silt loam; weak fine and medium subangular blocky structure; soft, friable non-sticky and plastic; 10% one-half inch sized gravels; few fine and plentiful medium roots; few fine and medium common coarse tubular pores; slightly effervescent; clear wavy boundary.

B2 -- 9-15" -- Dark grayish brown (9YR 4/2) moist silt loam; moderate fine subangular blocky structure; soft, friable, slightly sticky and plastic; 15% angular gravels up to 3 inches in diameter; few fine and abundant medium roots; few fine and medium and plentiful coarse tubular pores; strongly effervescent; clear wavy boundary.

C1 -- 15-22" -- Brown (10YR 5/3) moist very gravelly heavy silt loam; massive; slightly hard friable; 50% gravels up to 3 inches in diameter; few fine roots; few fine medium and common coarse tubular pores; strongly effervescent; clear wavy boundary.

C2 -- 22-34" -- Brown (10YR 5/3) moist very gravelly silt loam; massive; slightly hard friable; 70% gravels up to 2 inches in diameter; few fine and medium roots; few

fine and medium coarse tubular pores; strongly effervescent; clear wavy boundary.

C3 -- 34-42"+ -- Brown (9YR 5/3) moist light silt loam; slightly hard firm; very few medium roots; few coarse and fine pores; strongly effervescent.

SITE ANALYSIS SUMMARY

WRITEUP NO.	PHOTO NO.
BP 03	

FOREST	RANGER DISTRICT	ALLOTMENT	EXAMINER	DATE
14	08		MEL LEH TAP	5/23/67

TRANSECT NO.	PLOT SIZE	PLOT INTERVAL	TYPE DESIGNATION	KIND OF LIVESTOCK	SLOPE	ASPECT
	1.92	10	09		06	128

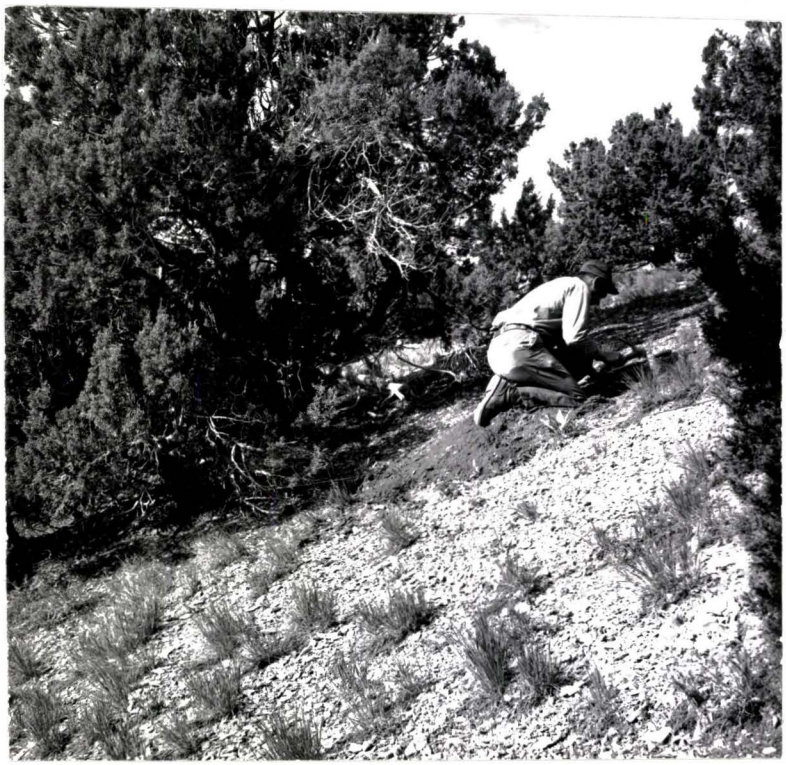
LOCATION: West side of road 1 mile up rt. fork Rice Canyon

ELEVATION: 55

	SPECIES	TOTAL PRODUCTION - GREEN WEIGHT					DRY WT.	* PROD. DRY WT. PER ACRE	PERCENT COMPOSITION	DESIRABILITY RATING		
		TRANS 1	TRANS 2	TRANS 3	TOTAL					D	I	L
GRASSES	AGSP	90	68	52	210	70	350	140	55	30	25	
	POSE	25	22	14	61	20	100	45	18		18	
	AGSM	42	3	18	63	21	105	47	19	19		
	BRTET	2	2	T	4	1	5	2	1			1
									234			
FORBS	ANDI2	1	2	1	4	2	10	2	1			1
	PHLO	2	0	0	2	1	5	1	T			
	ASCI	9	6	18	33	11	55	11	5		5	
	LEGR	T	0	0	T	T	T					
	DESCU	T	T	T	T	T	T					
	LOTR	0	6	0	6	2	10	2	1	1		
	MIGR	0	2	0	2	1	5	1	T			
	ALAC	0	1	0	1	T	T		T			
	DELPH	0	3	0	3	1	5	1	T			
	NEBR	0	0	2	2	1	5	1	T			
								19				
BROWSE	GUSA	0	0	T	T	T	T					
		Adjusted production = 400 lbs/A										
	TOTAL						AVERAGE	AV. 253	X X X			
	% OVERSTORY (TREES)	11	17	3			13	% DESIRABLE 50				
	% OVERSTORY (SHRUBS)							% INTERMEDIATE 48				
	% CROWN COVER (HERB.)							% LEAST DESIRABLE 2				
	% BARE GROUND	29	37	26			31	CONDITION RATING:				
	% ROCK & PAV. (NAT.)							COMPOSITION RATING				
	% ROCK & PAV. (UNNAT.)	31	21	27			26	PRODUCTION RATING				
	% VEG. & LITTER	40	42	47			43	FORAGE CONDITION RATING				
	% SOIL DISTURBANCE							GROUND COVER INDEX				
	AV. NO. DROPPINGS							CURRENT EROSION INDEX				
	AV. NO. PELLET GROUPS							SOIL CONDITION RATING				

* CALCULATE BY FORMULA BASED ON SIZE OF PLOTS USED (SEE 41.3-3)

BROWSE: CONDITION_____ APPARENT TREND_____



Stop BP04 - Ridgetop between forks of Rice Canyon.

Elevation 6000', Slope 31% Aspect - 108

Juniper data

Height Class	Percent
0'-2'	7
3'-6'	13
7'-11'	47
12'-17'	33
18'+	0

Trees per acre - 157
Percent tree overstory - 48
Juniper trees
Av. height - 10'
Av. crown diameter - 12'

Juniper tree age data

Old decadent Juniper stand shows about 84 years per inch (radius) by ring count. Most trees are 12"-18" diameter. One 4' basal diameter tree showed 94 years by ring count.

SITE ANALYSIS SUMMARY

WRITEUP NO.	PHOTO NO.
BP 04	

FOREST	RANGER DISTRICT	ALLOTMENT	EXAMINER	DATE
14	08		MEL LEH TAP	5/24/67

TRANSECT NO.	PLOT SIZE	PLOT INTERVAL	TYPE DESIGNATION	KIND OF LIVESTOCK	SLOPE	ASPECT
	1.92	10	09		31	108

LOCATION: Ridge top between forks of Rice Canyon — ELEVATION: 60

	SPECIES	TOTAL PRODUCTION - GREEN WEIGHT TRANS 1	TRANS 2	TRANS 3	TOTAL	DRY WT.	* PROD. DRY WT. PER ACRE	PERCENT COMPOSITION	DESIRABILITY RATING D	I	L
GRASSES	AGSP	145	135	320	600	240	96				
	BRTE†	T	10	5	15	5	2				
	POSE	20	20	10	50	22	7				
	ORHY	0	0	10	10	5	2				
						272	107				
FORBS	ASTRA	0	0	10	10	2	1				
	VIOLA	0	0	T	T	T					
	CYLO	15	135	70	220	44	15				
	ALAC	T	T	10	10	2	1				
	NEBR	10	25	20	55	11	4				
	PHLO	T	5	5	10	2	1				
	MEGR	T	10	0	10	2	1				
	ANDI2	T	T	0	T	T	T				
	GABO	5	0	5	10	2	1				
	COLI	T	0	0	T	T	T				
	COTE	0	5	5	10	2	1				
	ARABI	0	T	5	5	1	T				
	ASPU	0	10	0	10	2	1				
	CRYPT	0	10	0	10	2	1				
	ARDI	0	0	10	10	2	1				
						74	28				
BROWSE	SYOR	0	20	0	20	7	2				
		Adjusted production = 217 16/A									
TOTAL						AVERAGE	AV. 137	X X X			
% OVERSTORY (TREES)			10	50		20	% DESIRABLE				
% OVERSTORY (SHRUBS)			T			T	% INTERMEDIATE				
% CROWN COVER (HERB.)		22	26	18		22	% LEAST DESIRABLE				
% BARE GROUND		34	43	29		35	CONDITION RATING:				
% ROCK & PAV. (NAT.)							COMPOSITION RATING				
% ROCK & PAV. (UNNAT.)		44	31	53		43	PRODUCTION RATING				
% VEG. & LITTER							FORAGE CONDITION RATING				
% SOIL DISTURBANCE							GROUND COVER INDEX				
AV. NO. DROPPINGS							CURRENT EROSION INDEX				
AV. NO. PELLET GROUPS							SOIL CONDITION RATING				

* CALCULATE BY FORMULA BASED ON SIZE OF PLOTS USED (SEE 41.3-3)

BROWSE: CONDITION _____ APPARENT TREND _____

U. S. Forest Service
Ogden, Utah
2510

RANGE SOILS INVESTIGATIONS

Forest Sawtooth Plot No. (BP - 04) 4

Date 5/24/67 Observers Arnold

Location Ridge between forks of Rice Canyon

Elevation 6100 Annual Precipitation

Ecological Type

Erosion EI - 32

Surface Condition

Parent Material Limestone and limey sandstone

Landform Upper scarp

Relief Aspect E Slope 30%

Estimated Productivity

Remarks

Form R4-2500-2
Rev. Nov. 1959

RANGE - SOIL STUDIES

Juniper Type - Stop 4

Colors are for the dry conditions unless otherwise noted.

A11 -- 0-2" -- Grayish brown (10YR 5/2) gravelly silt loam, very dark grayish brown (10YR 3/2) moist; very weak fine granular structure; loose, friable, non-sticky and plastic; very few fine roots; slightly effervescent; clear wavy boundary.

A12 -- 2-6" -- Grayish brown (10YR 5/2) gravelly silt loam, very dark grayish brown (10YR 3/2) moist; moderate and strong fine and medium granular structure; soft, friable, slightly sticky and plastic; 20% fine gravels; abundant fine and medium roots; slightly effervescent; clear wavy boundary.

A13 -- 6-13" -- Dark brown (10YR 3/3) moist silt loam; weak to moderate fine and medium regular structure; soft, friable, non-sticky and plastic; 15% angular gravel one inch in diameter; few fine and plentiful medium roots; common fine medium and coarse tubular pores; slightly effervescent; clear wavy boundary.

B2 -- 13-24" -- Reddish brown (5YR 5/3) moist crushed, reddish brown (5YR 4/3) moist aggregate, coarse gravelly silt loam; very weak medium subangular blocky structure; slightly hard, firm, sticky and plastic; very few thin patchy clay films in cavities; 40% gravel 2 inches in diameter; few fine and medium, to plentiful coarse roots; common medium coarse tubular pores; slightly effervescent;

clear wavy boundary.

IIB21 -- 24-35" -- Reddish brown (51R 4/3) moist and brown (7.5YR 4/3) moist, coarse gravelly silty clay loam; very weak medium subangular blocky; slightly hard, friable, sticky and plastic; very few thin patchy clay films in cavities; 60% angular gravels one to four inches in diameter; few fine and very few medium roots; common medium and coarse tubular pores; slightly effervescent; clear wavy boundary.

IIB22 -- 34-42"+ -- Reddish brown (2.5YR 4/4) moist aggregate, reddish brown (2.5YR 5/4) moist crushed, silty clay loam; very weak medium blocky structure breaking to massive; slightly hard, friable, sticky and plastic; very few thin patchy clay films in cavities; 20% angular gravels; few medium roots; common medium and coarse tubular pores; slightly effervescent.

Stop BP05 - Upper west face of ridge between forks of Rice Canyon.

Elevation 6000', Slope 42% Aspect - 250 (W)

Juniper data

Height Class	Percent	
0'-2'	14	Trees per acre - 61
3'-6'	86	Percent tree overstory - 0.1
7'-11'	0	Juniper trees
12'-17'	0	Av. height - 3.7'
18'+	0	Av. crown diameter - 3.9'

SITE ANALYSIS SUMMARY

WRITEUP NO.	PHOTO NO.
BP 05	

FOREST	RANGER DISTRICT	ALLOTMENT	EXAMINER	DATE
14	08		LEL LEH TAP	5/24/67

TRANSECT NO.	PLOT SIZE	PLOT INTERVAL	TYPE DESIGNATION	KIND OF LIVESTOCK	SLOPE	ASPECT
	1.92	10	09		42	250

LOCATION: Dip Slope - Upper west face of ridge between forks of Rice Canyon

ELEVATION: 60

	SPECIES	TOTAL PRODUCTION - GREEN WEIGHT				DRY WT.	* PROD. DRY WT. PER ACRE	PERCENT COMPOSITION	DESIRABILITY RATING		
		TRANS 1	TRANS 2	TRANS 3	TOTAL				D	I	L
GRASSES	AGSP	300	340	425	1065	426	142	48	30	18	
	POSE	55	115	70	240	116	39	13		13	
	BRTE	0	T	25	25	11	4	2			2
FORBS	PEHOC	10	5	10	25	10	3	1		1	
	ERIGE	5	5	10	20	4	1	T			
	DESCU	0	0	5	5	1	T	T			
	HAIN	0	0	5	5	1	T	T			
	ASTRA	0	0	T	T	T	T	T			
	CACH	0	0	T	T	T	T	T			
	CYLO	0	0	5	5	1	T	T			
BROWSE	ARARA	105	210	590	905	317	106	36		25	11
		Adjusted production = 467 165/A									
	TOTAL					AVERAGE	AV. 295	X X X			

% OVERSTORY (TREES)						% DESIRABLE	30
% OVERSTORY (SHRUBS)	12	8	8		9	% INTERMEDIATE	57
% CROWN COVER (HERB.)						% LEAST DESIRABLE	13
% BARE GROUND	24	12	11		16	CONDITION RATING:	
% ROCK & PAV. (NAT.)	53	75	63		63	COMPOSITION RATING	
% ROCK & PAV. (UNNAT.)						PRODUCTION RATING	
% VEG. & LITTER	23	13	26		21	FORAGE CONDITION RATING	
% SOIL DISTURBANCE						GROUND COVER INDEX	
AV. NO. DROPPINGS						CURRENT EROSION INDEX	
AV. NO. PELLET GROUPS						SOIL CONDITION RATING	

* CALCULATE BY FORMULA BASED ON SIZE OF PLOTS USED (SEE 41.3-3)

BROWSE: CONDITION_____ APPARENT TREND_____

U. S. Forest Service
Ogden, Utah
2510

RANGE SOILS INVESTIGATIONS

Forest Sawtooth Plot No. (BP - 05) 5

Date 5/24/67 Observers Arnold

Location Left fork of Rice Canyon

Elevation 6100 Annual Precipitation

Ecological Type

Erosion EI - 45

Surface Condition

Parent Material Limey Sandstone and limestone

Landform Depositional slope

Relief Aspect W Slope 40%

Estimated Productivity

Remarks

Form R4-2500-2
Rev. Nov. 1959

RANGE - SOIL STUDIES

Juniper Type - Stop 5

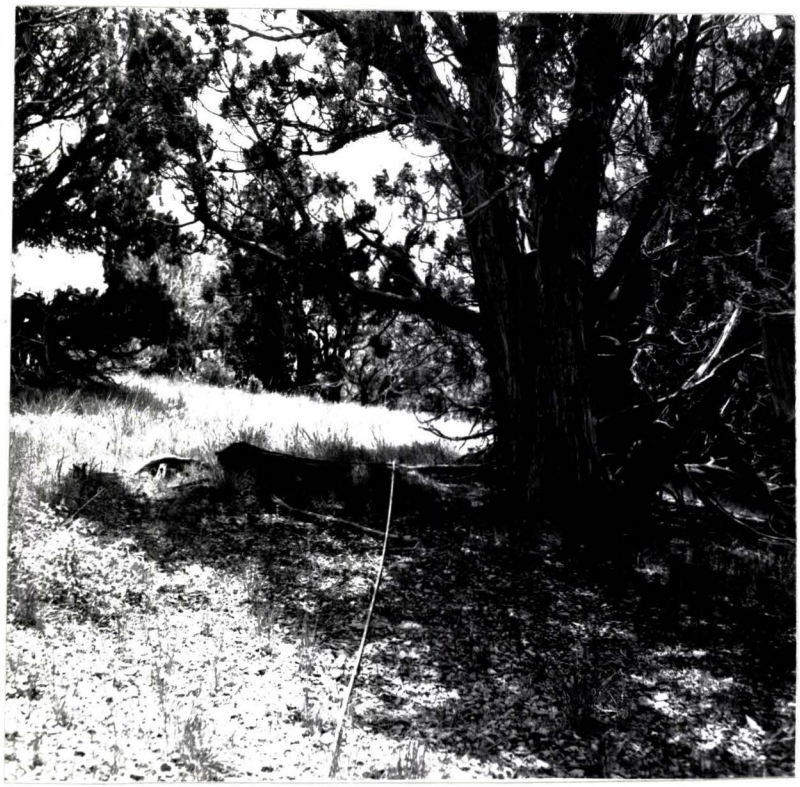
Colors are for the dry conditions unless otherwise noted.

A0 -- 0-1" -- Solifluction mulch;very gravelly light silt loam; weak medium platy structure; soft, friable, non-sticky and plastic; 80% angular one quarter inch to two inch gravels; effervescent; clear wavy boundary.

A1 -- 0-5" -- Dark grayish brown (10YR 4/2) moist gravelly silt loam; weak fine granular structure; loose, friable, non-sticky and plastic; 15% gravel; abundant fine and few medium roots; effervescent; clear wavy boundary.

A3 -- 5-10" -- Grayish brown (10YR 5/2) moist silt loam; weak and moderate fine to medium granular structure; loose, friable, non-sticky and slightly plastic; 30 to 40% one-half to two inch angular gravels; plentiful fine and medium roots; effervescent.

R -- 10"+ -- Sandstone or limestone bedrock.



Stop BP06 - Lower third of scarp slope - mideast face of ridge between forks of Rice Canyon.

Elevation 5900', Slope 27% Aspect - 48 (NE)

Juniper data

Height Class	Percent
0'-2'	6
3'-6'	0
7'-11'	46
12'-17'	19
18+	9

Trees per acre - 296
Percent tree overstory - 66
Av. height - 12'
Av. crown diameter - 10'

SITE ANALYSIS SUMMARY

WRITEUP NO.	PHOTO NO.
BP-06	

FOREST	RANGER DISTRICT	ALLOTMENT	EXAMINER	DATE
14	08		MEL · LEH TAP	5/24/67

TRANSECT NO.	PLOT SIZE	PLOT INTERVAL	TYPE DESIGNATION	KIND OF LIVESTOCK	SLOPE	ASPECT
	1.92	10	09		27	48

LOCATION: Lower 1/3 of scarp slope - mideast face of ridge between forks of Rice Canyon. ELEVATION: 59

	SPECIES	TOTAL PRODUCTION - GREEN WEIGHT				DRY WT.	* PROD. DRY WT. PER ACRE	PERCENT COMPOSITION	DESIRABILITY RATING D	I	L
		TRANS 1	TRANS 2	TRANS 3	TOTAL						
GRASSES	AGSP	160	100	150	410	164	55				
	BRTET	120	85	500	705	247	82				
	POSE	10	60	75	145	66	22				
							159				
FORBS	MEAL	0	0	T	T	T	T				
	DELPH	0	0	15	15	3	1				
	MIGR	5	40	15	60	12	4				
	GABO	10	65	15	90	18	6				
	NEBR	T	20	20	40	8	3				
	VIOLA	5	10	T	15	3	1				
	ALAC	20	25	155	200	30	10				
	PHLO	T	10	0	10	2	1				
	AGOSE	T	0	0	T	T	T				
	CYLO	10	0	0	10	2	1				
	ANDI?	0	5	0	5	1	T				
	ASCI	0	10	0	10	2	1				
	COTE	0	30	15	45	9	3				
	COLI	0	0	160	160	32	11				
	DESCU	0	0	T	T	T	T				
	ARABI	0	0	5	5	1	T				
	BORAG	0	0	20	20	4	1				
							43				
BROWSE	CHVI	T	0	0							
		Adjusted production = 317 lbs/Acre									
	TOTAL					AVERAGE	AV. 202	X X X			

% OVERSTORY (TREES)	24	32	39		32	% DESIRABLE	
% OVERSTORY (SHRUBS)						% INTERMEDIATE	
% CROWN COVER (HERB.)						% LEAST DESIRABLE	
% BARE GROUND	21	10	7		13	CONDITION RATING:	
% ROCK & PAV. (NAT.)	37	5	16		19	COMPOSITION RATING	
% ROCK & PAV. (UNNAT.)						PRODUCTION RATING	
% VEG. & LITTER	42	85	77		68	FORAGE CONDITION RATING	
% SOIL DISTURBANCE						GROUND COVER INDEX	
AV. NO. DROPPINGS						CURRENT EROSION INDEX	
AV. NO. PELLET GROUPS						SOIL CONDITION RATING	

* CALCULATE BY FORMULA BASED ON SIZE OF PLOTS USED (SEE 41.3-3)

BROWSE: CONDITION _____ APPARENT TREND _____

U. S. Forest Service
Ogden, Utah
2510

RANGE SOILS INVESTIGATIONS

Forest Sawtooth Malta R.D. Plot No. (BP - 06) 6

Date 5/24/67 Observers Arnold

Location Ridge between forks of Rice Canyon, lower 1/3 of scarp slope

Elevation 6000 Annual Precipitation

Ecological Type

Erosion Slight EI - 49

Surface Condition

Parent Material

Landform

Relief Aspect E Slope 30%

Estimated Productivity

Remarks

Form R4-2500-2
Rev. Nov. 1959

RANGE - SOIL STUDIES

Juniper Type - Stop 6

Colors are for the dry conditions unless otherwise noted.

O1 -- 1½-0" -- Litter, juniper needles and twigs.

A11 -- 0-1½" -- Dark brown(10YR 3/3) loam, very dark grayish brown (10YR 3/2) moist; weak fine granular structure; very loose, very friable, non-sticky and slightly plastic; 10% gravels; plentiful fine roots; strongly effervescent; clear smooth boundary.

A12 -- 1½-6" -- Brown (10YR 5/3) loam, very dark grayish brown (9YR 3/2) moist; weak subangular blocky breaking to weak in moderate, fine and medium granular structure;soft, friable, non-sticky and plastic; plentiful fine and medium roots; few fine tubular pores; strongly effervescent; clear wavy boundary.

B1 -- 6-12" -- Dark grayish brown (9YR 4/2) moist, silt loam; weak medium subangular blocky structure; soft, friable, slightly sticky and plastic; thin patchy clay films in cavities; few fine, plentiful medium, and abundant coarse roots; common medium and coarse tubular pores; strongly effervescent; clear wavy boundary.

B2 -- 12-20" -- Brown (9YR 5/3) moist, heavy silt loam; weak medium subangular blocky structure; hard, friable, slightly sticky plastic; thin continuous clay film in cavities; 40% one to three inch angular gravels; few fine, plentiful medium, and few coarse roots;

common medium and many coarse tubular pores; strongly effervescent; abrupt wavy boundary.

R -- 20"+ -- Fractured limestone bedrock.

Stop BP07 - Sloping colluvial bench - midslope, east face of ridge between forks of Rice Canyon.

Elevation - 5800', Slope 13% Aspect 128°

Juniper data

Height Class	Percent
0'-2'	14
3'-6'	56
7'-11'	27
12'-17'	3
18+	0

Trees per acre - 453
Percent tree overstory - 19
Av. tree height - 5'
Av. crown diameter - 4'

SITE ANALYSIS SUMMARY

WRITEUP NO.	PHOTO NO.
BP 07	

FOREST	RANGER DISTRICT	ALLOTMENT	EXAMINER	DATE
14	08		MEL LEH TAP	5/24/67

TRANSECT NO.	PLOT SIZE	PLOT INTERVAL	TYPE DESIGNATION	KIND OF LIVESTOCK	SLOPE	ASPECT
	1.92	10	09		13	128

LOCATION: Sloping Colluvial bench - Mid-slope east face of ridge between forks of Rice Canyon

ELEVATION: 58

	SPECIES	TOTAL PRODUCTION - GREEN WEIGHT				DRY WT.	* PROD. DRY WT. PER ACRE	PERCENT COMPOSITION	DESIRABILITY RATING D	I	L
		TRANS 1	TRANS 2	TRANS 3	TOTAL						
GRASSES	AGSP	225	520	855	1600	640	213	72	30	42	
	ORHY	60	25	0	85	38	13	4	4		
	POSE	10	40	35	85	38	13	4		4	
	BRTE	10	5	5	20	7	2	1			1
							241				
FORBS	ANDI2	0	0	5	5	1	T	T			
	CYLO	0	15	0	15	3	1	T			
	PALO	T	T	15	15	3	1	T			
	ALAC	T	40	5	45	7	2	1		1	
	COLI	T	0	0	T	T	T	T			
	DELPH	5	0	0	5	1	T	T			
	GABO	T	25	0	25	5	2	1		1	
	ASCI	15	15	50	80	16	5	2		2	
	NEBR	T	10	0	10	2	1	T			
	AGOSE	5	5	0	10	2	1	T			
	MIGR	T	10	5	15	3	1	T			
	MEAL	T	0	0	T	T	T	T			
	LOTR	0	55	5	60	12	4	1	1		
	DESCU	0	5	10	15	3	1	T			
	COTE	0	30	5	35	7	2	1			1
							21				
BROWSE	SYOR	35	90	0	125	44	15	5	2		
	ARTR	50	60	50	160	48	16	5		5	
	GUSA	0	0	75	75	26	9	3			3
		Adjusted production = 475 lbs/A									
	TOTAL					AVERAGE	AV. 302	X X X			
	% OVERSTORY (TREES)	8	4	4		5	% DESIRABLE 40				
	% OVERSTORY (SHRUBS)	6	3	2		4	% INTERMEDIATE 55				
	% CROWN COVER (HERB.)						% LEAST DESIRABLE 5				
	% BARE GROUND	37	27	28		31	CONDITION RATING:				
	% ROCK & PAV. (NAT.)	20	16	36		24	COMPOSITION RATING				
	% ROCK & PAV. (UNNAT.)						PRODUCTION RATING				
	% VEG. & LITTER	43	57	36		45	FORAGE CONDITION RATING				
	% SOIL DISTURBANCE						GROUND COVER INDEX				
	AV. NO. DROPPINGS						CURRENT EROSION INDEX				
	AV. NO. PELLET GROUPS						SOIL CONDITION RATING				

* CALCULATE BY FORMULA BASED ON SIZE OF PLOTS USED (SEE 41.3-3)

BROWSE: CONDITION _____ APPARENT TREND _____

U. S. Forest Service
Ogden, Utah
2510

RANGE SOILS INVESTIGATIONS

Forest Sawtooth - Malta R.D. Plot No. (BP - 07) 7

Date 5/67 Observers Arnold

Location Ridge between forks of Rice Canyon - mid slope

Elevation 5800 Annual Precipitation

Ecological Type

Erosion EI - 35

Surface Condition

Parent Material Limestone and sandstone

Landform Colluvial slope and bench

Relief Aspect ESE Slope 12%

Estimated Productivity

Remarks

Form R4-2500-2
Rev. Nov. 1959

RANGE - SOIL STUDIES

Juniper Type - Stop 7

Colors are for the dry conditions unless otherwise noted.

O1 -- 1-0" -- Grass, leaves and brush twigs.

A11 -- 0-2" -- Dark grayish brown (10YR 4/2) gravelly loam, Very dark grayish brown (10YR 3/2) moist; weak fine granular structure; loose, friable, non-sticky and slightly plastic; 20% fine gravels up to one inch; few fine and plentiful medium roots; strongly effervescent; clear wavy boundary.

A12 -- 2-6" -- Dark grayish brown (9YR 4/2) moist, heavy gravelly loam; weak fine blocky breaking to weak to moderate fine and medium granular structure; soft, firm, non-sticky and plastic; 15% angular gravels to one inch in diameter; plentiful fine and medium roots; common medium and coarse tubular pores; strongly effervescent; clear wavy boundary.

B1 -- 6-12" -- Brown (9YR 4/3) moist, loam; very weak medium sub-angular blocky structure; soft, friable, non-sticky and plastic; 10% gravels; few fine and medium, few fine medium and coarse roots; strongly effervescent; clear wavy boundary.

B2ca -- 12-20" -- Brown (10YR 5/3) moist crushed, very pale brown (10YR 7/3) moist aggregate, silt loam; massive; hard, firm, non-sticky plastic; few discontinuous clay films

in cavities; 15% fine gravels; few fine and medium roots; strongly effervescent; clear wavy boundary.

B3ca -- 20-36" -- Colors and textures are the same as B2ca; hard, firm, slightly sticky and plastic; few discontinuous clay films in cavities; 30% angular gravels to one inch in diameter; few fine medium and coarse roots; strongly effervescent; clear wavy boundary.

Cca -- 36"+ -- Yellowish brown (9YR 5/4) moist aggregate, light brown (7.5YR 6/4) moist crushed, loam; massive structure hard, firm, non-sticky and slightly plastic; 15% gravels to one-half inch in diameter; very few fine roots; strongly effervescent.

Stop BP08 - Right side, Right Fork of Rice Canyon, 1/3 mile above National Forest boundary.

Juniper data

Height Class	Percent
0'-2'	8
3'-6'	54
7'-11'	34
12'-17'	4
18+	0

Trees per acre - 209
Percent tree overstory - 9
Av. tree height - 6'
Av. crown diameter - 4.5'

SITE ANALYSIS SUMMARY

WRITEUP NO.	PHOTO NO.
BP-08	

FOREST	RANGER DISTRICT	ALLOTMENT	EXAMINER	DATE
14	08		MEL LEH TAP	5/24/67

TRANSECT NO.	PLOT SIZE	PLOT INTERVAL	TYPE DESIGNATION	KIND OF LIVESTOCK	SLOPE	ASPECT
	1.92	10	09		05	126

LOCATION: Right side right fork Rice Canyon Road 1/3 mile above N.F. boundry

ELEVATION: 55

	SPECIES	TOTAL PRODUCTION - GREEN WEIGHT				DRY WT.	* PROD. DRY WT. PER ACRE	PERCENT COMPOSITION	DESIRABILITY RATING		
		TRANS 1	TRANS 2	TRANS 3	TOTAL				D	I	L
GRASSES	AGSM	65	280	0	345	155	52	14	14		
	ORHY	35	40	5	80	36	12	3	3		
	AGSR	470	120	940	1530	602	201	56	30	26	
	POSE	30	90	45	165	74	25	7		7	
	BRTE	5	5	35	45	15	5	1			1
FORBS	PHIOC	15	35	140	190	76	25	7		7	
	ASTRA	5	0	10	5	1	T	T			
	AGOSE	15	5	0	20	4	1	T			
	DELPH	10	10	0	20	4	1	T			
	ALAC	5	5	10	20	3	1	T			
	PHLO	20	20	30	70	14	5	1		1	
	LOTR	5	0	0	5	1	T	T			
	DESCU	T	T	0	T	T	T	T			
	ANDI2	0	5	15	20	1	T	T			
	MIGR	0	T	0	T	T	T	T			
	ASCI	0	35	0	35	7	2	1		1	
	COTE	0	5	5	10	2	1	T			
BROWSE	CHVI	5	165	50	220	77	26	7		7	
	ARTRT	75	15	30	120	36	12	3		3	
		Adjusted production = 573 lbs/Acre									
	TOTAL					AVERAGE	AV. 369	X X X			
	% OVERSTORY (TREES)	5	1	0		2					
	% OVERSTORY (SHRUBS)	3	1	0		1					
	% CROWN COVER (HERB.)										
	% BARE GROUND	44	39	43		42					
	% ROCK & PAV. (NAT.)		7	5		4					
	% ROCK & PAV. (UNNAT.)	3				1					
	% VEG. & LITTER	53	54	52		53					
	% SOIL DISTURBANCE										
	AV. NO. DROPPINGS										
	AV. NO. PELLET GROUPS										

% DESIRABLE	47
% INTERMEDIATE	52
% LEAST DESIRABLE	1
CONDITION RATING:	
COMPOSITION RATING	
PRODUCTION RATING	
FORAGE CONDITION RATING	
GROUND COVER INDEX	
CURRENT EROSION INDEX	
SOIL CONDITION RATING	

* CALCULATE BY FORMULA BASED ON SIZE OF PLOTS USED (SEE 41.3-3)

BROWSE: CONDITION _____ APPARENT TREND _____

U. S. Forest Service
Ogden, Utah
2510

RANGE SOILS INVESTIGATIONS

Forest Sawtooth Malta R.D. Plot No. (BP - 08) 8

Date 5/24/67 Observers Arnold

Location Rice Canyon - right side right fork of road 1/3 mile above National Forest boundary

Elevation 5500 Annual Precipitation

Ecological Type

Erosion EI - 45

Surface Condition

Parent Material Limey wash materials

Landform Pediment

Relief Aspect SE Slope 4%

Estimated Productivity

Remarks

Form R4-2500-2
Rev. Nov. 1959

RANGE - SOIL STUDIES

Juniper Type - Stop 8

Colors are for the dry conditions unless otherwise noted.

A11 -- 0-2" -- Grayish brown (10YR 5/2) fine sandy loam, very dark grayish brown (10YR 3/2) moist; very weak fine granular structure; loose, friable, non-sticky slightly plastic; less than 5% gravels; abundant fine roots strongly effervescent; clear smooth boundary.

A12 -- 2-6" -- Grayish brown (10YR 5/2) light silt loam, dark grayish brown (10YR 4/2) moist; weak fine subangular blocky breaking to weak moderate, fine and medium granular structure; slightly hard, friable, non-sticky plastic; 40% gravels; abundant fine and few medium roots; common fine to coarse tubular pores; strongly effervescent; clear wavy boundary.

A13 -- 6-12" -- Dark grayish brown (9YR 4/2) moist, silt loam; very weak medium subangular blocky breaking to weak and moderate medium granular structure; slightly hard, friable, slightly sticky plastic; 40% gravels; plentiful fine roots; common fine to coarse tubular pores; strongly effervescent; clear wavy boundary.

B22 -- 12-20" -- Brown (9YR 4/3) moist, light silty clay loam; very weak coarse blocky structure; slightly hard, friable, slightly sticky and plastic; thin discontinuous clay films in cavities; 40% gravels; few fine roots; common

fine and coarse tubular pores; strongly effervescent; clear wavy boundary.

B23 -- 20-32" -- (9YR 5/3) moist crushed, brown (10YR 4/3) moist aggregate, light silty clay loam; many large distinct pale brown (10YR 6/3) moist aggregate, mottles; massive; hard, firm, slightly sticky and plastic; 20% gravels; very few fine and few medium roots; common fine and medium tubular pores; strongly effervescent; abrupt wavy boundary.

C1ca -- 32"+ -- White (10YR 8/2) fine sandy loam; very hard, firm, non-sticky and slightly plastic; strongly effervescent.

Stop BP09 - Scarp position just below ridgetop - south face of ridge due north of 6-mile Spring in Six Mile Canyon.

Elevation - 6600', Slope 45% Aspect 147°

Juniper data

Height Class	Percent
0'-2'	0
3'-6'	33
7'-11'	60
12'-17'	7
18+	0

Trees per acre - 261
Percent tree overstory - 22
Av. tree height - 8'
Av. crown diameter - 7'

Juniper Tree age data

Basal diameter	Age by ring count
$2\frac{1}{2}$"	30 years
4"	41 "
4" (one stem)	48 "
$5\frac{1}{2}$"	53 "

SITE ANALYSIS SUMMARY

WRITEUP NO.	PHOTO NO.
BP-09	

FOREST	RANGER DISTRICT	ALLOTMENT	EXAMINER	DATE
14	09		NEL LEH TAP	5/25/67

TRANSECT NO.	PLOT SIZE	PLOT INTERVAL	TYPE DESIGNATION	KIND OF LIVESTOCK	SLOPE	ASPECT
	1.92	10	09		45	147

LOCATION: Scarp position just below ridgetop - south face of ridge due north of 6-mile spring in Six Mile Canyon — ELEVATION: 66

	SPECIES	TOTAL PRODUCTION - GREEN WEIGHT TRANS 1	TRANS 2	TRANS 3	TOTAL	DRY WT.	* PROD. DRY WT. PER ACRE	PERCENT COMPOSITION	DESIRABILITY RATING D	I	L
GRASSES	AGSP	380	125	260	765	306	102	31	30	1	
	BRTE	265	75	80	420	147	49	15			15
	POSE	135	280	135	550	248	83	26		20	6
							234				
FORBS	COTE	40	10	20	70	14	5	2			1
	ALAC	85	55	10	150	23	8	2			1
	PHLO	5	0	5	10	2	1	T			
	BASA	5	45	415	465	116	39	12	4		
	CRAC	40	5	5	50	10	3	1			
	MIGR	5	0	T	5	1	T	T			
	DESCU	10	T	5	15	3	1	T			
	OPUFI	0	360	0	360	36	12	4			1
							69				
BROWSE	ARTRT	160	0	35	195	58	19	6		1	
	CHVI	35	0	0	35	13	4	1			
	SYOR	0	10	0	10	4	1	T			
							24				
	Adjusted production = 517 165/Acre										
	TOTAL					AVERAGE	AV. 327	X X X			
	% OVERSTORY (TREES)	24	25	24		21	% DESIRABLE		34		
	% OVERSTORY (SHRUBS)	13	T	2		5	% INTERMEDIATE		22		
	% CROWN COVER (HERB.)						% LEAST DESIRABLE		24		
	% BARE GROUND	20	22	24		22	CONDITION RATING:				
	% ROCK & PAV. (NAT.)	12	18	34		21	COMPOSITION RATING				
	% ROCK & PAV. (UNNAT.)						PRODUCTION RATING				
	% VEG. & LITTER	68	60	42		57	FORAGE CONDITION RATING				
	% SOIL DISTURBANCE						GROUND COVER INDEX				
	AV. NO. DROPPINGS						CURRENT EROSION INDEX				
	AV. NO. PELLET GROUPS						SOIL CONDITION RATING				

* CALCULATE BY FORMULA BASED ON SIZE OF PLOTS USED (SEE 41.3-3)

BROWSE: CONDITION _____ APPARENT TREND _____

U. S. Forest Service
Ogden, Utah
2510

RANGE SOILS INVESTIGATIONS

Forest Sawtooth Malta R.D. Plot No. (BP - 09) 9

Date 5/25/67 Observers Arnold

Location 6 mile spring - South face of ridge due north of spring just below ridgetop

Elevation _____ Annual Precipitation _____

Ecological Type _____

Erosion EI - 40

Surface Condition _____

Parent Material Sandstone, quartzite

Landform upper scarp slope

Relief _____ Aspect SE Slope 45%

Estimated Productivity _____

Remarks _____

Form R4-2500-2
Rev. Nov. 1959

RANGE - SOIL STUDIES

Juniper Type - Stop 9

Colors are for the dry conditions unless otherwise noted.

A11 -- 0-3" -- Very dark grayish brown (10YR 3/2) gravelly sandy loam, very dark grayish brown (10YR 3/2) moist; weak fine granular structure; loose, friable, non-sticky and non-plastic; 25% angular gravels; plentiful fine roots; slightly acid (pH 6.5); clear smooth boundary.

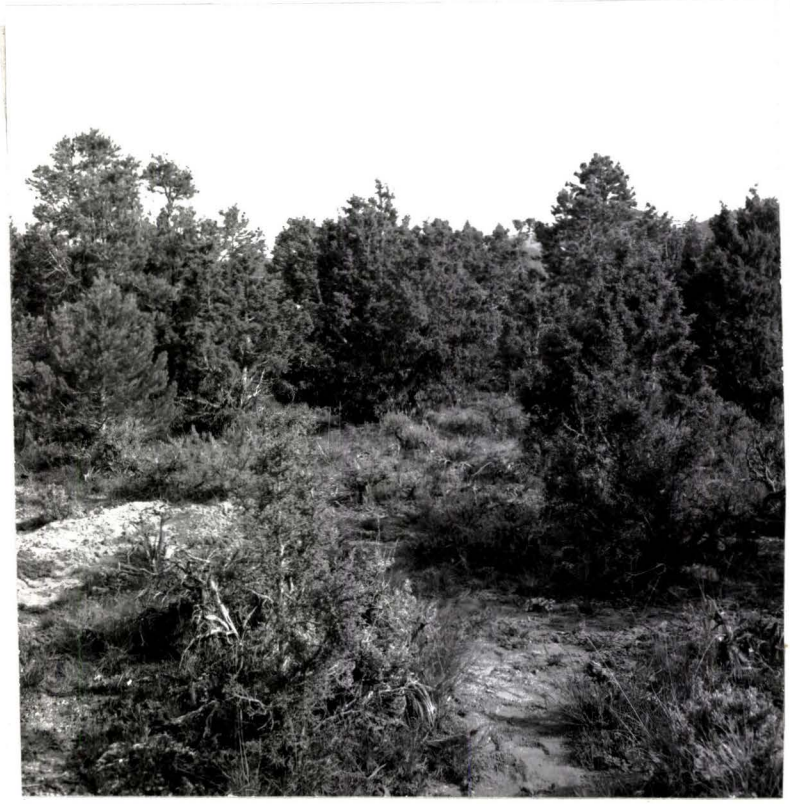
A12 -- 3-15" -- Dark grayish brown (10YR 4/2) moist, gravelly loam; weak medium subangular blocky breaking to weak moderate, fine to medium granular structure; soft, friable, non-sticky and slightly plastic; 15% angular gravels; few fine and coarse, plentiful medium roots; few fine to coarse tubular pores; (pH 7.0); clear wavy boundary.

B1 -- 15-23" -- Dark yellowish brown (10YR 4/4) moist, very gravelly loam; moderate medium granular structure; soft, friable, slightly sticky plastic; thin discontinuous clay films in cavities; 40% angular gravels to 6 inches in diameter; few plentiful fine and common roots; calcareous; clear wavy boundary.

R2 -- 23-31" -- Yellowish brown (10YR 5/5) moist, silt loam; massive; slightly hard, friable, non-sticky and plastic; 10% gravels to one inch in diameter; few fine medium roots; calcareous; clear irregular boundary.

C1ca -- 31-48" -- Light yellowish brown (10YR 6/4) moist, silt loam; massive; very hard, firm, non-sticky and plastic; 70% angular gravels; few medium roots; calcareous; clear wavy boundary.

C2ca -- 48"+ -- Very pale brown (10YR 8/3) silt loam, yellowish brown (10YR 5/4) moist; massive; 90% angular rock one-half to one inch in diameter; very few medium roots; calcareous.



Stop RR02 - Wildcat Creek - Alluvial covered pediment.

Elevation 6300', Slope 4% Aspect 256°

Tree data

Height Class	Percent Juniper	Percent P. Pine
0'-2'	15	11
3'-6'	26	11
7'-11'	13	9
12'-17'	7	2
18'+	0	6

Juniper per acre - 292
P. pine per acre - 187
% tree overstory - 37
Av. tree height
Juniper - 6 P. pine - 5
Av. crown diameter
Juniper - 4 P. pine - 5

Tree age data

8" pinyon - 68 years
8" juniper - 137 years

SITE ANALYSIS SUMMARY

WRITEUP NO.	PHOTO NO.
RR-02	

FOREST	RANGER DISTRICT	ALLOTMENT	EXAMINER	DATE
14	08		LEH - TAP	5/25/67

TRANSECT NO.	PLOT SIZE	PLOT INTERVAL	TYPE DESIGNATION	KIND OF LIVESTOCK	SLOPE	ASPECT
	1.92	10	09	C&H	04	256

LOCATION: Wildcat Creek Alluvial covered pediment — ELEVATION: 63

	SPECIES	TOTAL PRODUCTION - GREEN WEIGHT				DRY WT.	* PROD. DRY WT. PER ACRE	PERCENT COMPOSITION	DESIRABILITY RATING D	I	L
		TRANS 1	TRANS 2	TRANS 3	TOTAL						
GRASSES	POSE	150	145	65	360	162	54	34		20	14
	AGSM	30	40	50	120	54	18	11	11		
	AGSP	0	35	40	75	30	10	9	9		
							82				
	ERIOG	0	0	5	5	1	T	T			
	ZIPA	0	0	10	10	2	1	T			
	PECE	95	100	185	380	76	25	16		16	
	COPA	T	40	40	80	16	5	3		3	
	PHOC	15	60	30	105	42	14	10		10	
FORBS	ANDIZ	5	5	5	15	3	1	T			
	AGGL	T	0	0	T	T	T	T			
	PHLO	5	5	5	15	3	1	T			
	MIGR	T	0	0	T	T	T	T			
	COTE	5	10	0	15	3	1	T			
	ALAC	15	5	0	20	3	1	T			
	CALOC	5	0	0	5	1	T	T			
	SENEC	5	0	0	5	1	T	T			
	ASTRA	5	0	0	5	1	T	T			
	FRAT	0	10	0	10	2	1	T			
	CRAC	0	15	20	35	7	2	1	1		
	ASTER	0	0	5	5	1	T	T			
							52				
BROWSE	TECA	10	0	5	15	5	2	1		1	
	PUTR	25	0	0	25	9	3	2	2		
	SYOR	35	10	0	45	16	5	2	2		
	AMAL	T	0	0	T	T	T	T			
	ARTRT	0	85	70	155	46	15	10		10	
	CHVI	0	T	0	T	T	T	T			
							25				
		Adjusted production = 252 lbs.									
	TOTAL					AVERAGE	AV. 159	X X X			
	% OVERSTORY (TREES)	32	11	16		20	% DESIRABLE 26				
	% OVERSTORY (SHRUBS)	T	2	6		3	% INTERMEDIATE 60				
	% CROWN COVER (HERB.)						% LEAST DESIRABLE 14				
	% BARE GROUND	55	50	57		54	CONDITION RATING:				
	% ROCK & PAV. (NAT.)	8	6	9		8	COMPOSITION RATING.				
	% ROCK & PAV. (UNNAT.)						PRODUCTION RATING				
	% VEG. & LITTER	37	44	34		38	FORAGE CONDITION RATING				
	% SOIL DISTURBANCE						GROUND COVER INDEX				
	AV. NO. DROPPINGS						CURRENT EROSION INDEX				
	AV. NO. PELLET GROUPS						SOIL CONDITION RATING				

* CALCULATE BY FORMULA BASED ON SIZE OF PLOTS USED (SEE 41.3-3)

BROWSE: CONDITION _____ APPARENT TREND _____

U. S. Forest Service
Ogden, Utah
2510

RANGE SOILS INVESTIGATIONS

(RR - 02)

Forest Sawtooth Malta R.D. Plot No. 10

Date 5/26/67 Observers Arnold

Location Wilcat Creek

Elevation 6300 Annual Precipitation

Ecological Type

Erosion EI - 45

Surface Condition

Parent Material Calcareous sandstone

Landform Pediment

Relief Aspect N Slope 4%

Estimated Productivity

Remarks

Form R4-2500-2
Rev. Nov. 1959

RANGE - SOIL STUDIES

Juniper Type - Stop 10

Colors are for the dry conditions unless otherwise noted.

A11 -- 0-1½" Very dark grayish brown (10YR 3/2) moist, loam: weak fine granular structure; loam, friable, non-sticky and slightly plastic; abundant fine and few medium roots; vesicular pores; strongly calcareous; clear smooth boundary.

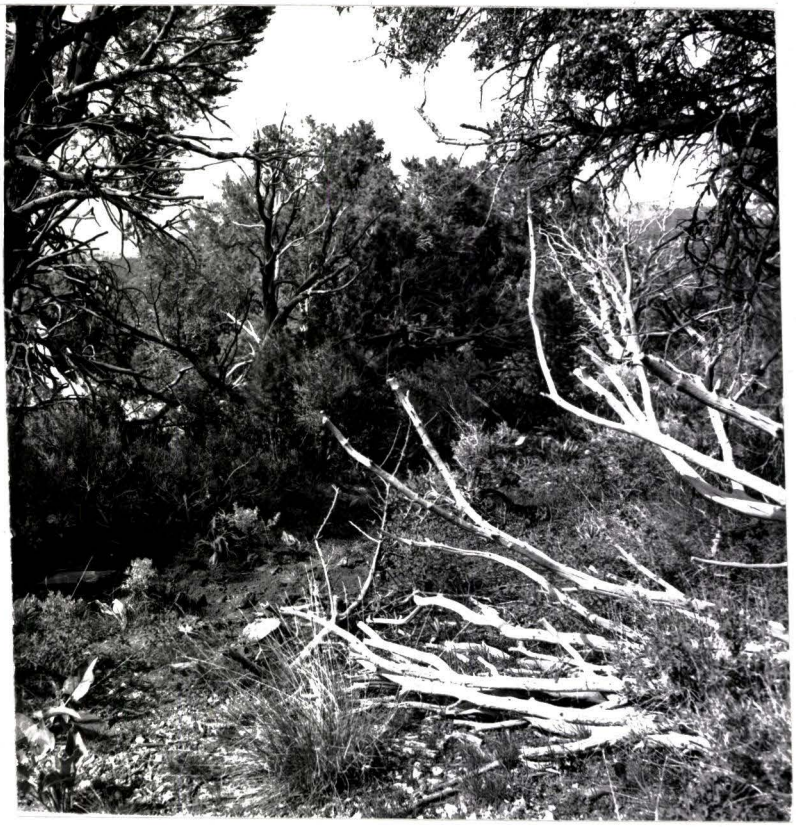
A12 -- 1½-6" -- Very dark grayish brown (10YR 3/2) moist, silt loam; very weak fine and medium subangular blocky breaking to weak and moderate fine granular structure; soft, friable, non-sticky and slightly plastic; abundant fine and medium roots common medium and coarse pores; strongly calcareous; clear wavy boundary.

B21ca-- 6-10" -- Brown (10YR 4/3) moist, light silty clay loam; weak fine and medium subangular blocky structure; hard, firm, slightly sticky and plastic; few discontinuous films in cavities; plentiful fine and medium roots; common medium and coarse tubular pores; strongly calcareous; gradual wavy boundary.

B22ca -- 10-15" -- Brown (10YR 5/3) moist, silty clay loam; weak medium blocky breaking to massive structure; hard, firm, sticky and plastic; few discontinuous clay films in cavities; very few fine and medium roots; common many and coarse tubular pores; strongly calcareous; clear irregular boundary.

C1ca -- 15-36" -- Pale brown (10YR 6/3) moist aggregate, light yellowish brown (10YR 6/4) moist crushed, light silty clay loam; few medium distinct brown (10YR 4/3) moist, mottles; massive; slightly hard, firm, slightly sticky plastic; very few fine roots; common fine pores; strongly calcareous; abrupt irregular boundary.

IIC2 -- 36-42"+-- 80% sandstone rock up to 12 inches in diameter.



Stop RR03 - Wildcat Creek - 3/4 mile east of road.

Elevation - 6800'

Tree data

Height Class	Percent Juniper	Percent P.Pine
0'-2'	8	22
3'-6'	0	49
6'-11'	0	8
12'-17'	5	5
18'+	0	3

P-J trees per acre - 322
Percent tree overstory - 19
Av. tree height
Juniper 5.6', P. Pine 5'
Av. crown diameter
Juniper - 5.6', P. Pine 3.8'

SITE ANALYSIS SUMMARY

WRITEUP NO.	PHOTO NO.
RR 03	

FOREST	RANGER DISTRICT	ALLOTMENT	EXAMINER	DATE
14	08		MELewis	5/25/67

TRANSECT NO.	PLOT SIZE	PLOT INTERVAL	TYPE DESIGNATION	KIND OF LIVESTOCK	SLOPE	ASPECT
	1.92	5	09			

LOCATION: Wildcat Creek — ELEVATION:

	SPECIES	TOTAL PRODUCTION - GREEN WEIGHT				DRY WT.	* PROD. DRY WT. PER ACRE	PERCENT COMPOSITION	DESIRABILITY RATING D	I	L
		TRANS 1	TRANS 2	TRANS 3	TOTAL						
GRASSES	POSE	190	255		445	200	100	39		20	19
	AGSP	200	5		205	82	41	15	15		
							141				
	ASTRAG	0	T		T	T	T	T			
FORBS	BASA	120	50		170	34	17	6	6		
	ALAC	75	75		150	23	12	4		4	
	LITHO	45	20		65	13	6	2			2
	ANTUAL	40	0		40	8	4	1			1
	HACHE	35	15		50	10	5	2		2	
	IONAL	20	0		20	4	2	1	1		
	COTE	20	10		30	6	3	1			1
	ERIOG	5	5		10	2	1	T			
	COLI	10	0		10	2	1	T			
	OTHER	15	0		15	3	2	1		1	
	LOTR	0	25		25	5	2	1	1		
	CRAC	0	10		10	2	1	T			
	PHLO	0	5		5	1	1	T			
	LEBR	0	20		20	4	2	1		1	
							26				
BROWSE	ARTRT	25	200		225	67	33	13		10	3
	SYOR	75	70		145	51	25	10	10		
	PRMI	5	25		30	10	5	2		2	
	AMAL	0	20		20	7	3	1	1		
							66				

Adjusted production = 420 lbs/Acre

TOTAL					AVERAGE	AV. 266	X X X			
% OVERSTORY (TREES)	0	16			8	% DESIRABLE 34				
% OVERSTORY (SHRUBS)	4	16			10	% INTERMEDIATE 40				
% CROWN COVER (HERB.)						% LEAST DESIRABLE 26				
% BARE GROUND	23	14			18	CONDITION RATING:				
% ROCK & PAV. (NAT.)	5	8			7	COMPOSITION RATING				
% ROCK & PAV. (UNNAT.)						PRODUCTION RATING				
% VEG. & LITTER	72	28			75	FORAGE CONDITION RATING				
% SOIL DISTURBANCE						GROUND COVER INDEX				
AV. NO. DROPPINGS						CURRENT EROSION INDEX				
AV. NO. PELLET GROUPS						SOIL CONDITION RATING				

* CALCULATE BY FORMULA BASED ON SIZE OF PLOTS USED (SEE 41.3-3)

BROWSE: CONDITION _____ APPARENT TREND _____

U. S. Forest Service
Ogden, Utah
2510

RANGE SOILS INVESTIGATIONS

Forest Sawtooth Malta R.D. Plot No. (RR - 03) 11

Date 5/26/67 Observers Arnold

Location Wildcat Creek

Elevation 6000 Annual Precipitation

Ecological Type

Erosion EI - 39

Surface Condition

Parent Material Limey quartzite and marble

Landform Broad pediment ridge

Relief Aspect NW Slope 16%

Estimated Productivity

Remarks

Form R4-2500-2
Rev. Nov. 1959

RANGE - SOIL STUDIES

Juniper Type - Stop 11

Colors are for the dry conditions unless otherwise noted.

A1 -- 0-2" -- Very dark grayish brown (10YR 3/2) moist, heavy silt loam; weak fine granular structure; hard, friable, slightly sticky and slightly plastic; 30% gravels one to two inches in diameter; plentiful fine roots; vesicular pores; calcareous; clear wavy boundary.

A3 -- 2-8" -- Very dark grayish brown (10YR 3/2) moist, loam; weak fine and medium granular structure; loose, friable, non-sticky and plastic; 30% gravels two to four inches in diameter; plentiful fine and medium roots; many medium and coarse tubular pores; calcareous; clear wavy boundary.

R -- 8-12"+ -- Shattered bedrock.

A1 -- 0-2" -- Very dark grayish brown (10YR 3/2) moist, loam; moderate fine and medium granular structure; loose, friable, non-sticky and slightly plastic; 10% gravels; few medium and abundant fine roots; calcareous.

A12 -- 2-10" -- Dark grayish brown (10YR 4/2) moist, loam; very weak medium subangular blocky breaking to weak fine subangular structure; loose, friable, non-sticky and slightly plastic; 30% gravels; few fine and coarse, abundant medium roots; calcareous.

R -- 10"+ -- 80% white, calcareous angular stone.

SUMMARY OF BLACK PINE AND RAFT RIVER SITE STUDY PLOTS

Tree Height Percent	Macroplot Numbers										
	PB01	BP02	BP03	BP04	BP05	BP06	BP07	BP08	BP09	RR02	RR03
0'-2'	0	0	0	7	14	6	14	8	0	J 15 P 11	J 8 P 22
3'-6'	30	24	48	13	86	0	56	54	33	J 26 P 11	J P 49
7'-11'	61	36	30	47	0	46	27	34	60	J 13 P 9	J P 8
12'-17'	9	31	22	33	0	39	3	4	7	J 7 P 2	J 5 P 5
18'+	0	9	0	0	0	9	0	0	0	J 0 P 6	J P 3
Trees Per acre	200	366	322	157	61	296	453	209	261	479	PJ 322
% Over-story	19	63	29	48	0.1	66	19	9	22	37	19
Age Years	29-97	--	41-76	up to 800 yr	--	--	--	--	30-53	8" 68 -137	--
Av. Height	7.6'	10.4'	7.8	10	3.7	12	5	6	8	J 6 P 5	J 5.6 P 5
Av. Cr. diam.	6.3'	8.3'	6.3	12	2.9	10	4	4.5	7	J 4 P 5	J 5.6 P 3.8
Other Data											
Herbage Prod.	lbs 453	175	400	217	467	317	475	573	517	252	165
% Veg.-Litter	53	46	43	43	21	68	45	53	57	38	75
Ins. Ef. Soil Depth	36	12	42	42	10	20	36	32	48	36	8-10
Surface Soil Texture	SiL	GrSiL	SiL	GrSiL	GrSiL	L	Gr L	FSL	GrSL	L	SiL+
Subsoil Texture	SiL+	SiL	SiL	GrSiL	GrSiL	SiL+	SiL	SicL-	SiL	SicL	L
% Stone & Gravel	T	10	15-70	15-60	15-40	10-40	10-30	5-40	15-90	--	10-30
Domi-nant Shrub	ARTR	GUSA	--	SYOR 2 %	ARAR	--	ARTR SYOR	CHVI	ARTR	ARTR	ARTR SYOR
Domi-nant Herb	AGSP	AGSP	AGSP	AGSP	AGSP	BRTE AGSP	AGSP	AGSP	AGSP POSE	POSE AGSM	POSE AGSP
Poten. Prod.											
% Bare Ground	33	33	31	22	16	13	31	42	22	54	18

Plants of Juniper Zone, Black Pine Mt.

Sawtooth National Forest

GRASSES

Agropyron smithii Rydb.
A. spicatum (Pursh) Scribn. & Smith
Bromus tectorum L.
Oryzopsis hymenoides (Roem. & Schult.) Ricker
Poa secunda Presl.

FORBS

Achillea millifolium lanulosa
Agoseris glauca (Pursh.) Raf.
A. sp.
Allium acuminatum Hook.
Antennaria dimorpha (Nutt.) Torr. & Gray
Arabis holboelii var. pendulocarpa (A. Nels.) Rollins
Aster sp.
Astragalus beckwithii T&G
A. calycosus Torr.
A. cibarius Sheld.
A. nudisiliquus A. Nels.
A. purshii Dougl.
Balsamorhiza sagittata (Pursh) Nutt.
Calochortus spp.
Castilleja angustifolia (Nutt.) G. Don
C. chromosa A. Nels.
Chaenactis douglasii (Hook.) Hook. & Arn.
Collinsia parviflora Dougl.
Collomia linearis Nutt.
Comandra pallida A. DC
Crepis acuminata Nutt.
Cryptantha humilus (Greene) Payson
C. torreyana (Gray) Greene
Cymopterus longipes S. Wats.
C. terebinthinus (Hook.) T&G
Delphinium nuttallianum Pritz. ex Walpers
Descurainia pinnata (Walt.) Britt.
Erigeron pumilus Nutt.
Eriogonum caespitosum Nutt.
E. ovalifolium Nutt.
Fritillaria atropurpurea Nutt.
Galium boreale L.
Gilia sinuata Dougl. ex Benth in DC
Hackelia patens (Nutt.) Johnst.
Haplopappus acaulis (Nutt.) C. & R.
H. uniflorus

Lithophragma bulbifera Rydb.
Lesquerella sp.
Lomatium dissectum var. multifidum (Nutt.) Math. & Const.
L. grayi (Coult. & Rose)
L. macrocarpum (Nutt.) C. & R.
L. triternatum (Pursh.) C. & R.
Melilotus alba Desr.
Mentzelia albicaulis Dougl. ex Hook.
Mertensia brevistyla S. Wats.
Microsteris gracilis (Hook.) Greene
Nemophila breviflora A. Gray
Pedicularis centranthera A. Gray
Petrophytum caespitosum (Nutt.) Rydb.
Phlox hoodii canescens (Torr. & Gray) Peck
P. longifolia Nutt.
Penstemon sp.
Schoenocrambe linifolia (Nutt.) Greene
Senecio integerrimus Nutt.
Viola sp.
Zigadenus paniculatus S. Wats.

TREES AND SHRUBS

Amelanchior alnifolia (Nutt.) Nutt.
Artemisia arbuscula Nutt.
A. tridentata Nutt.
Chrysothamnus nauseosus (Pall.) Britt.
C. viscidiflorus (Hook.) Nutt.
Eriogonum microthecum Nutt.
Gutierrezia sarothrae (Pursh.) Britt.
Juniperus osteosperma (Torr.) Little
Purshia tridentata (Pursh.) DC
Symphoricarpos oreophilus A. Gray
Tetradymia canescens DC